

What is claimed is:

1. An optical module mating with an optical connector that includes an optical fiber, comprising:

an optical sub-assembly having a head portion, said optical sub-  
5 assembly including an optical semiconductor device therein;  
an optical receptacle having a cavity for receiving said optical connector  
and a space for receiving said optical sub-assembly; and  
an elastic member disposed between said optical receptacle and said  
optical sub-assembly,  
10 wherein said elastic member enables said head portion of said optical  
sub-assembly to displace within said cavity.

2. The optical module according to claim 1,

wherein said receptacle includes a groove in an inner wall surface  
15 thereof, said groove having a front surface and a rear surface, and said optical  
sub-assembly includes a flange in an outer surface thereof, and  
wherein said flange and said elastic member is disposed within said  
groove such that said elastic member is sandwiched between said flange and  
said front surface of said groove.

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3. The optical module according to claim 2, further comprises a bracket  
disposed between said flange and said rear surface of said groove;

wherein said bracket aligns said optical sub-assembly with said optical  
receptacle.

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4. The optical module according to claim 3, wherein said elastic member

is an O-ring.

5. The optical module according to claim 3, wherein said elastic member comprises a ring portion and a plurality of limb portions extending from said ring portion to an inside thereof and warping from said ring portion, said  
5 plurality of limb portions being in contact with said front surface of said groove and said ring portion being in contact with said flange.

6. The optical module according to claim 1,  
10 wherein said receptacle further includes a groove in an inner wall surface thereof and said optical sub-assembly further includes a groove in an outer surface thereof, said groove of said optical sub-assembly having a front groove surface and a rear groove surface, and  
said optical module further includes a bracket disposed in said groove of  
15 said optical receptacle, said bracket being in contact with said front groove surface of said optical sub-assembly and said elastic member being disposed between said rear groove surface of said optical sub-assembly and said bracket.

7. The optical module according to claim 6, wherein said elastic member  
20 is an O-ring.

8. The optical module according to claim 1, further includes a partition wall for dividing said cavity from said space, and said optical sub-assembly further includes a flange in an outer surface thereof,  
25 wherein said head portion protrudes to said cavity by passing through said partitioning wall, and said elastic member is disposed between said

partition wall and said flange.

9. The optical module according to claim 1,

wherein said optical sub-assembly further includes an sleeve and a

5 coupling fiber optically coupled to said optical semiconductor device,

wherein said optical connector includes a ferrule securing said optical  
fiber therein, and

wherein said optical fiber secured in said optical connector is physically  
in contact with said coupling fiber when said ferrule of said optical connector

10 mates with said sleeve of said optical sub-assembly.